



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,801	12/08/2003	Tatsuro Nagahara	FN4104US-CIP	8923

7590

05/31/2006

Alan P. Kass
Clariant Corporation
70 Meister Avenue
Somerville, NJ 08876

EXAMINER

LEE, SIN J

ART UNIT	PAPER NUMBER
----------	--------------

1752

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/728,801

Applicant(s)

NAGAHARA ET AL.

Examiner

Sin J. Lee

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-6, 8-15 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-6, 8-15 and 17-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/806,852.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4-6, 8-15 and 17-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 4, 5, 8, 9, 11, 14, 17 and 18, applicants recite "*polysiloxazane* having . . ., as its main repeating units, . . . $-(RSiO_{1.5})-$ or $-(SiO_2)-$. It is unclear to the Examiner how a polymer having those repeating units can be a polysiloxazane because it is the Examiner's understanding that polysiloxazane has to have nitrogen atoms in its molecule and those repeating units $-(RSiO_{1.5})-$ or $-(SiO_2)-$ do not have nitrogen atoms in them.

Appropriate correction or clarification is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 4-6, 8-15 and 17-19 are rejected under 35 U.S.C. 102(a) as being anticipated by Nagahara et al (US 2003/0113657 A1).

Nagahara et al is prior art as of its publication date (June 19, 2003) under 102(a) since effective filing date of present application is December 8, 2003, not June 18, 2001 on which the parent application 09/806,852 was filed. – see “Response to Arguments” below.

Claims 6 of Nagahara teaches a photosensitive polysilazane composition comprising a polysilsesquiazane having a number average molecular weight of 100 to 100,000 and containing a basic constituent unit of $-\text{SiR}^6(\text{NR}^7)_{1.5}-$, in which R^6 represents a C_{1-3} alkyl group or a phenyl group and R^7 represents a H atom, a C_{1-3} alkyl group or a phenyl group, and a photoacid generator. Based on this teaching, one skilled in the art would immediately envisage the R^6 to be a methyl group and the R^7 to be a H atom. Also, claim 14 of Nagahara teaches a method forming a patterned inter-layer dielectric, which comprises forming a coating film of the radiation sensitive polysilsesquiazane composition, patternwise irradiating the coating film, dissolving and removing the irradiated part of the coating film, and leaving the residual patterned coating film in the ambient atmosphere or burning the coating film.

As photoacid generator, Nagahara teaches peroxides (such as 3,3',4,4'-tetra(t-butylperoxycarbonyl)benzophenone shown in [0163]) and nitrobenzyl ester (see [0083]). Therefore, Nagahara teaches present inventions of claims 4-6 and 11-15.

Nagahara also teaches the use of a sensitizing dye such as coumarin in [0033] and the use of an oxidization catalyst such as palladium propionate in [0035]. Therefore, Nagahara teaches present inventions of claims 8-10 and 17-19.

Response to Arguments

5. Applicants argue that they are entitled to the effective date of the parent application, June 18, 2001 and thus the rejection of present claims over Nagahara'657 should be withdrawn. However, MPEP 706,02 (V)(B) states that if the application is a continuation-in-part of an earlier U.S. application, any **claims** (please not that MPEP does not say "any part of a claim" but say "any *claims*") in the new application not supported by the specification and claims of the parent application have an effective filing date equal to the *filing date of the new application*. Any **claims** which are **fully supported** under 35 U.S.C. 112 by the earlier parent application have the effective filing date of that earlier parent application. Also, see MPEP 201.11 (B) which states that only the **claims** of the continuation-in-part application that are disclosed in the manner provided by the first paragraph of 35 U.S.C. 112 in the prior-filed application are entitled to the benefit of the filing date of the prior-filed application. It is furthermore stated that *any claim* in a continuation-in-part application which is directed **solely** to subject matter adequately disclosed under 35 U.S.C. 112, in the parent nonprovisional application is entitled to the benefit of the filing date of the parent nonprovisional application. However, if **a claim** in a continuation-in-part application recites "**a feature**" which was not disclosed or adequately supported by a proper disclosure under 35 U.S.C. 112 in the parent nonprovisional application, but which was first introduced or adequately supported in the continuation-in-part application, **such a claim is entitled only to the filing date of the continuation-in-part application**. In the instant case, every independent claims of present application recites features which were not disclosed or adequately supported by a proper disclosure under 35 U.S.C. 112 in the parent

Art Unit: 1752

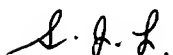
application, but which were first introduced or adequately supported in the present continuation-in-part application. Thus, all of the present claims are entitled only to the filing date of the present continuation-in-part application, which is December 8, 2003.

For the reasons stated above, present rejection over Nagahara et al'657 still stands.

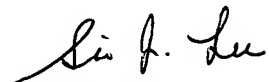
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



S. Lee
May 27, 2006



SIN LEE
PRIMARY EXAMINER